

## CLAIMS :

1. A capillary array comprising a plurality of capillaries which include a polymer protective film on the surface thereof and of which one ends are bundled and of which other ends are spread; a light detection portion in which the capillaries are juxtaposed each other and are aligned substantially on a plane and the polymer protective films therein are removed; a head which holds the spread capillaries integrally, an electrode which is built-in in the head, electrically connected to the head and is immersed in a sample solution; and another electrode provided at the bundled capillaries.
2. A capillary array in which one ends of a plurality of capillaries with a protective coat are bundled and the end portions thereof are aligned in flat so as to form a buffer solution injection port; the other ends of the capillaries penetrate through a capillary head with a built-in electrode and are inserted into metal tubes which are connected electrically to the built-in electrode, a light detection portion is formed at an intermediate portion of the capillary array wherein the protective coat of the capillaries is removed, the protective coat removed capillaries are sandwiched between first and second support substrates, a window

which permits emission of fluorescence is formed on one of the first and second support substrates and a black coating is formed on the other of the first and second support substrates at a position corresponding to the fluorescence emission permitting window on the one support substrate.

3. A capillary array according to claim 2, wherein one of the support substrates at the light detection portion of the capillaries is processed to provide a groove which permits laser beam passage so as to reduce fluorescence reflection from the bottom thereof.

4. A capillary array according to claim 3, wherein the capillaries at the capillary head are cut in an alignment, are inserted closely into corresponding tubes and are secured thereto.

5. A capillary array according to claim 1, further comprising a sample injection port designed to permit attachment of a cap for protecting the same.

6. A capillary array according to claim 1, wherein the ends of the capillaries at a sample injection port are slightly projected from a metallic tubes.

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